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10/798,891	03/12/2004	Russell Smith	8618-USA	4903

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EXAMINER	
CHRISS, JENNIFER A	
ART UNIT	PAPER NUMBER
1794	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,891	SMITH ET AL.	
	Examiner	Art Unit	
	JENNIFER A. CHRISS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/31/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 5, 7, 9 – 11, 13, 15 – 17 and 21 – 32* is/are pending in the application.

4a) Of the above claim(s) *30-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 5, 7, 9 – 11, 13, 15 – 17 and 21 – 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. Per the Communication mailed on February 21, 2008, the Office Action mailed 1/25/08 has been withdrawn and vacated. A new Office Action follows.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's Amendments and Accompanying Remarks filed on October 31, 2007 has been entered and carefully considered. Claims 9, 15 and 16 are amended, claims 21 – 32 are added, claims 8, 12, 14 and 18 – 20 are cancelled and claims 1 – 5, 7, 9 – 11, 13, 15 – 17 and 21 – 32 are pending. In view of Applicant's addition of claims 21 – 29, the Examiner has revised the previously applied rejections below. The invention as currently claimed is not found to be patentable for reasons herein below.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

4. Newly submitted claims 30 – 32 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 30 - 32 are directed to a method of making a fiber mat faced gypsum wall board classified in

class 442, subclass 386 while the originally filed claims are directed to a fiber mat gypsum board classified in class 427, subclass 402. The newly filed claims 30 - 32 and the originally filed invention are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as contacting the fiber mat to the gypsum slurry, allowing the slurry to harden and then coating the opposite side of the fiber mat. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 30 – 32 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

5. Claims 1 – 5, 7, 9 – 11, 13, 15 and 21 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randall et al. (US 2002/0155282) in view of Ali (U.S. Patent No. 4,647,486).

As to claims 1 and 21, Randall et al. disclose a gypsum core sandwiched between two layers of glass fiber mats that were pre-coated with a combination of mineral pigment, inorganic adhesive binder, and organic binder (Abstract). The fibrous mat has a thickness between 10 and 40 mils (paragraph 38). The coating allows air and water to evaporate through during drying of the board (paragraph 37). The slurry penetrates into the non- coated sided of the fabric and contacts the coating (paragraph 54).

As to claims 2 and 8, Randall et al. teach using various hydrophobic, UV resistant polymer latex materials (paragraph 49).

As to claim 3, the glass fibers may have a diameter of 13 to 16 microns

(paragraph 39).

As to claim 4, the mat may weigh 1 to 3 pounds per 100 square feet (paragraph 39).

As to claims 5 and 27, the gypsum core density may be between 40 and 55 pounds per cubic foot (paragraph 36).

As to claims 7 and 9, Randall et al. teach the claimed portions of mineral pigment, inorganic binder, and organic binder (paragraph 41).

As to claim 10, the coating is first applied as an aqueous composition (paragraph 53).

As to claim 11, the claimed additives may be combined with the coating (paragraph 59).

As to claims 13-15, water-resistant additive, such as PVA or wax emulsion is used in the gypsum core (paragraph 34).

As to claim 22, Randall et al. teach that the mineral pigment may comprise limestone (calcium carbonate) (paragraph 42) and the organic binder may comprise an acrylic resin (paragraph 31).

As to claim 28, Randall et al. teach that the coated mat is liquid impermeable but does allow water vapor to pass through (paragraph 41).

As to claim 1, 21 and 23 - 24, Randall et al. do not disclose the percent thickness of the mat into which the coating extends. However, various values provided by Randall et al. imply Applicant's claimed limitation of 30 to 50%, penetration within about 30 –

50% of the thickness of the glass fiber mat over at least 50 percent of the surface area across the mat or penetration is within about 35 - 50% of the thickness of the glass fiber mat over at least 75% of the surface area of the mat. Randall et al. disclose the mat is completely embedded into the coating on one surface (paragraph 51). The thickness of the fiber mat is 10 to 40 mils (paragraph 38). The midpoint of this range would be 25 mils. Randall et al. teach the coating should have a thickness of 10 mils (paragraph 52). These values indicate a percent penetration of the coating into the mat of about 40%. Also, Randall et al. disclose that where a relatively thin mat is used (i.e. 10 mils, since this is the lowest thickness value disclosed), a coating as thin as 4 mils may suffice (paragraph 52). This would also give a percent penetration of 40%.

Even if not implicitly inherent, it would have been obvious to a person having ordinary skill in the art at the time of the invention to extend the coating between 30 to 50%, penetration within about 30 – 50% of the thickness of the glass fiber mat over at least 50 percent of the surface area across the mat or penetration is within about 35 - 50% of the thickness of the glass fiber mat over at least 75% of the surface area of the mat in order to provide sufficient bonding, since Randall et al. teach embedding the fabric into the coating and teach the coating may vary in thickness from 4 to 30 mils (paragraph 52).

Randall et al. do not disclose the percentage of combined water in the gypsum core in a region near the bond.

Ali teaches that combined water in gypsum provides for an effective fire barrier when about 21% of combined water is present (column 1, lines 20-23).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to provide at least 17% combined water in the gypsum core of Randall et al. in order to improve fire barrier properties, as taught by Ali.

As to the limitation of microporosity of the coating in claims 6 – 7 and 25 - 26 and the three-minute Cobb value of claim 2 and tensile strength of the bond between the gypsum board and mat facer of claim 29, although Randall et al. in view of Ali do not explicitly teach the measurement of microporosity as measured by the modified Gurley method, the three-minute Cobb value of 1.5 grams or below and the tensile strength of the bond between the gypsum core and mat facer of about 16 pounds per square inch, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. the same coating comprising mineral pigment, organic binder, and inorganic binder) and in the similar production steps (i.e. pre-coating a fibrous mat and bonding the mat to a gypsum slurry) used to produce the gypsum board. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed microporosity would obviously have been provided by the process disclosed by Randall et al. because the entire goal of the reference is to provide a coating that is liquid impermeable, but does allow water vapor to pass through (paragraph 41).

6. Claim 16 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Randall et al. in view of Ali as set forth above, and further in view of Babcock et al. (U.S.

Patent No. 4,746,365).

Randall et al. teach that the latex adhesive binder may be a styrene-acrylic copolymer (claim 16). However, Randall et al. do not teach the acrylic portion of the copolymer can be (meth)acrylic.

Babcock et al. teach various latex emulsions for coating gypsum boards (Abstract). Babcock et al. disclose that copolymers of styrene and methacrylate create latex useful for this purpose (column 8, lines 1-5-16).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use methacrylate copolymer in Randall et al. as taught by Babcock et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Randall et al. in view of Ali and Babcock et al. as set forth above, and further in view of Miyakoshi (U.S. Patent No. 5,827,788).

Randall et al. teach that the board may have both surfaces faced with a coated fibrous mat, but may have a surface that is not faced with a coated fibrous mat (paragraph 57).

Miyakoshi teach that a blend of glass fibers and synthetic fibers can create a decorative layer useful on gypsum boards (column 4, lines 1-9).

It would have been obvious to a person having ordinary skill in the art at the time

of the invention to use a fiber layer of glass and synthetic fibers in order to create a decorative layer on the gypsum board of Randall et al., as taught by Miyakoshi.

Double Patenting

8. Claims 1 – 5, 7, 9 – 11, 13, 15 – 17 and 21 - 29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,3-16, and 18- 23 of copending Application No. 10/417,344 in view of Ali.

The '344 Application provides a gypsum core, fibrous mat, and a coating comprising mineral pigment and hydrophobic, UV resistant polymer latex adhesive. The dependent claims from the Patent provide similar structural limitations as to those found in the present application. While the '344 Application is silent with respect to the percentage of combined water found in the gypsum core, providing an amount greater than 17% is determined to be obvious in view of Ali for the reasons set forth above in the prior art rejection.

This is a provisional obviousness-type double patenting rejection.

9. Claims 1 – 5, 7, 9 – 11, 13, 15 – 17 and 21 - 29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,808,793 in view of Ali.

The '793 Patent provides a gypsum core, fibrous mat, and a coating comprising mineral pigment and hydrophobic, UV resistant polymer latex adhesive. The dependent claims from the Patent provide similar structural limitations as to those found in the present application. While the '793 Patent is silent with respect to the percentage of

combined water found in the gypsum core, providing an amount greater than 17% is determined to be obvious in view of Ali for the reasons set forth above in the prior art rejection.

Response to Arguments

10. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.

11. Applicant argues that Randall et al. in view of Ali do not teach or suggest a coating having a microporosity of between 2 and 45 seconds as measured by a modified Gurley method. Contrary to Applicant's arguments, the Examiner submits that the burden has been met for establishing inherency of a microporosity of between 2 and 45 seconds as measured by the Gurley method. According to MPEP 2112.01, when the structure recited in the reference is substantially identical to that of the claims (which has been established in the above rejection), the claimed properties or functions (i.e. Applicant's claimed microporosity as measured by a modified Gurley method) are presumed to be inherent. When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. Applicant does not provide evidence that Randall et al. and/or Ali do not teach the claimed microporosity of between 2 and 45 seconds as measured by a modified

Gurley method but instead argues that the coating microporosity is an unknown property at the time of the invention and the requirement for microporosity was not recognized in the cited references. It should be noted that it has been held that "there is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference". Schering Corp. v. Geneva Pharm. Inc., 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003) (rejecting the contention that inherent anticipation requires recognition by a person of ordinary skill in the art before the critical date and allowing expert testimony with respect to post-critical date clinical trials to show inherency); see also Toro Co. v. Deere & Co., 355 F.3d 1313, 1320, 69 USPQ2d 1584, 1590 (Fed. Cir. 2004)(**"[T]he fact that a characteristic is a necessary feature or result of a prior-art embodiment (that is itself sufficiently described and enabled) is enough for inherent anticipation, even if that fact was unknown at the time of the prior invention.**"); Abbott Labs v. Geneva Pharms., Inc., 182 F.3d 1315, 1319, 51 USPQ2d 1307, 1310 (Fed.Cir.1999). Applicant's arguments are not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/
Examiner, Art Unit 1794

/J. A. C./
Examiner, Art Unit 1794